THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ARTHUR FÖHL

Appeal No. 97-1115
Application 08/385,741[1]

HEARD: May 6, 1999

Before MEISTER, PATE, and GONZALES, Administrative Patent Judges.

MEISTER, Administrative Patent Judge.

DECISION ON APPEAL

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[1] Application for patent filed February 8, 1995. According to appellant, this application is a continuation of Application 08/019,770, filed February 19, 1993.

Arthur Föhl (the appellant) appeals from the final rejection of claims 19-25. Claims 10 and 18, the only other claims remaining in the application, stand allowed.

We REVERSE.

The appellant's invention pertains to an energy converter for a vehicle occupant restraining system. Independent claim 19 is further illustrative of the appealed subject matter and a copy thereof may be found in APPENDIX A of the brief.

The references relied on by the examiner are:

De Venne	3,583,530	Jun. 8, 1971
Tsuge et al. (Tsuge)	4,258,934	Mar. 31, 1981
Reid et al.	4,360,171	Nov. 23, 1982
Föhl (Fohl)	4,423,846	Jan. 3, 1984

Claims 19-23 and 25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tsuge in view of Reid and Fohl. According to the examiner:

> Tsuge et al discloses in Figures 1-3 a plastically deformed tube (column 1, lines 47-54) for a seat belt tensioning device (abstract). A piston member 2 in the tube has rollers or balls 3 in a recess defining a ramp. Upon movement of the piston member in a first direction the rollers move from a rest position to an engagement position to plastically deform the wall to a noncircular position as in Figure 3. Reid et al disclose

> cylindrical rollers 68, 70 biased against a wall 44 to stop motion of a safety belt. The walls 54,56 of a member 52 form recesses with ramps for each roller 68, 70. Fohl discloses (Figures 9 and 20A and 20B) a circular tube 95 with a piston 96 receiving a cable 16 and spring or plate 100 for biasing the balls 98. It would have been obvious to one of ordinary skill in the art to modify Tsuge et al to include cylindrical rollers as taught by Reid et al in order to stop motion of the belt (as an alternative roller shape to Tsuge et al's balls) and to include a circular tube and a cable attached to a piston as well as a resilient plate as taught by Fohl in order to use a tube shape well known in the art, to move the safety belt using well known structure in the art, and to bias the rollers away from the locking position during initial movement of the piston. [Final rejection, pages 2 and 3.]

Claim 24 stands rejected under 35 U.S.C. § 103 as being unpatentable over Tsuge in view of Reid, Fohl and De Venne. The examiner is further of the opinion that it would have been obvious to form the wall of the cylinder 1 of Tsuge, as modified by Reid and Fohl, of a varying thickness in view of the teachings of De Venne.

The examiner's rejections are not sustainable. Independent claims 19 and 21 require that cylindrical rollers plastically deform the converter body ***to convert energy*** (claim 19) and ***for converting energy*** (claim 21) during an energy stroke of the piston. Although the examiner has correctly

noted that the balls 31 of Tsuge plastically deform the wall of the cylinder 1, they do not do so for the purpose of converting energy during an energy dissipating stroke of the piston 2 as the examiner would apparently have us believe. Instead, in Tsuge it is the deformation of the iron sheet member 4 in the embodiment of Figs. 1-3, the cylindrical body 41 in the embodiments of Figs. 4-6 and the iron sheet 42 in the embodiment of Figs. 7 and 8, that convert energy during the energy dissipation stroke of the piston (see, e.g., col. 3, lines 20-25; col. 6 lines 23-37). On the other hand, the purpose of the balls 31 is to simply ***lock*** the piston to the wall of the cylinder 1 in the event that "a further tension force larger than the operating force of the piston **2** is applied to the seat belt **S**" (see, e.g., col. 3, lines 28-31). Even if some small amount of energy is absorbed when the balls 31 are forced outwardly to plastically deform the wall of the cylinder 1, it is well settled that terms in a claim should be construed in a manner consistent with the specification and construed as those skilled in the art would construe them (***see In re Bond***, 910 F.2d 831, 833, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990), ***Specialty Composites v. Cabot Corp.***, 845 F.2d 981, 986,

6 USPQ2d 1601, 1604 (Fed. Cir. 1988) and ***In re Sneed***, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983)). Here, we do not believe that the artisan, consistent with the appellant's specification, would construe Tsuge's ***locking*** arrangement to correspond to the claimed energy-converting structure.

We further do not believe that it would have been obvious to substitute cylindrical rollers for Tsuge's balls 31 in view of the teachings of Reid as the examiner has proposed. As we have noted above, the balls 31 of Tsuge serve to plastically deform the wall of the cylinder 1. Although Reid shows cylindrical rollers 68,70, these rollers cooperate with inclined, ***flat*** walls 64,66 on resilient collet members 50,52 in order to press these members together to ***grip*** cable 42 (see the paragraph bridging columns 2 and 3). It is thus readily apparent that the rollers of Reid do not perform the function of plastically deforming anything or, for that matter, it is not even apparent that they would have the ***capability*** of plastically deforming the wall of Tsuge's cylinder 1 if they were incorporated into Tsuge in the manner proposed by the

examiner. The examiner has merely relied on Fohl[2] for the teaching of a (1) cylindrical tube, (2) a cable attached to the piston and (3) a resilient plate. Thus, even if we were to agree with the examiner that it would have been obvious to incorporate these features of Fohl into the device of Tsuge, the basic deficiency of the combined teachings of Tsuge and Reid that we have noted above would not be overcome.

With respect to claim 24, we have carefully reviewed the teachings of De Venne but find nothing therein which would overcome the deficiencies of Tsuge, Fohl and Reid.

In view of the foregoing, the decision of the examiner to reject claims 19-25 under 35 U.S.C. § 103 is reversed.

REVERSED

[2] As the examiner apparently recognizes, although Fohl discloses rollers 98, there is no teaching that these rollers are ***cylindrical*** as expressly required by independent claims 19 and 21. Moreover, the rollers 98 are used to ***clamp*** the piston 96 to the wall of the cylinder 95 (see the sentence bridging columns 9 and 10) and do not perform a plastic deforming function.

James M. Meister Administrative Patent Judge	)	
William F. Pate Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
John F. Gonzales Administrative Patent Judge	)	

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